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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/650,079 | 08/28/2003 | Udo Klein | 15609-011001 / 2003P00416 | 7215 |
| 32864 | 7590 | 04/17/2006 | EXAMINER | |
| FISH & RICHARDSON, P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022 | | | MAHMOOD, REZWANUL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2164 | |

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/650,079 | Applicant(s) KLEIN, UDO | |
| | Examiner Rezwanul Mahmood | Art Unit 2164 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/11/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11-14, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. In claim 11 lines 2-3, the phrase "a time constraint such that no gap is allowed between any two of the first data records and second data records" is indefinite.
4. Since claims 12 and 13 depend on claim 11, and claim 14 depends on claim 13, those claims are also indefinite.
5. In claim 20 lines 2-3, the phrase "between any two of the data records" is indefinite.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question whether the claim is directed merely to an abstract idea that is not tied to a environment

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or machine which would result in a practical operation producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

8. Claims 10-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question whether the claim is directed merely to an abstract idea that is not tied to a environment or machine which would result in a practical operation producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

9. Claims 19-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question whether the claim is directed merely to an abstract idea that is not tied to a environment or machine which would result in a practical operation producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser (US Publication 2005/0010606) in view of Gupta (US Patent 6,415,326).

12. With respect to claim 1, Kaiser discloses a method comprising:

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translating grouping values into nodes of a directed graph (Kaiser: Paragraph 5, lines 1-2), however, does not disclose expressly wherein the grouping values are associated with periods of timelines, the timelines comprising data records;

The Gupta reference, however, discloses grouping values associated with periods of timelines, and the timelines comprising data records (Gupta: Column 3, lines 38-47).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to have associated the grouping values with periods of timelines.

The suggestion or motivation of doing so would be to utilize time-scale modification of data and synchronizing different data (Gupta: Column 1, lines 56-66).

Therefore, it would have been obvious to combine Kaiser with Gupta for the benefit of grouping values associated with timelines.

With respect to the remainder of claim 1, Kaiser in view of Gupta discloses the following:

distributing data through the nodes to obtain a modified subset of the data records (Kaiser: Paragraph 35, lines 1-16; Figure 2);

re-distributing the data recursively along the nodes to obtain a modified directed graph (Kaiser: Paragraph 61, lines 1-12); and

translating the modified directed graph into a modified plurality of timelines that include the modified subset of data records (Gupta: Column 2, lines 41-52; Kaiser: Paragraph 61, lines 1-12).

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13. With respect to claim 2, Kaiser in view of Gupta discloses the method of claim 1, wherein the data records are subject to a time constraint such that temporal gaps between the data records are not allowed, and further wherein the modified subset of data records are in compliance with the time constraint (Gupta: Column 7, lines 19-23).

14. With respect to claim 3, Kaiser in view of Gupta discloses the method of claim 1 comprising extending a data record preceding a temporary gap between data records caused by a modification of the data records through the temporary gap to a next-occurring data record (Gupta: Column 7, lines 19-23).

15. With respect to claim 4, Kaiser in view of Gupta discloses the method of claim 1 wherein translating sequences of grouping values comprises:

assigning identical grouping values to a single node (Kaiser: Figure 2); and
inserting edges of the directed graph between pairs of nodes that correspond to consecutively-occurring ones of the periods (Kaiser: Figure 2; Paragraph 7, lines 4-6).

16. With respect to claim 5, Kaiser in view of Gupta discloses the method of claim 4 comprising representing a node of the directed graph based on a grouping value and beginning point of an associated one of the periods (Kaiser: Paragraph 5, lines 1-3; Figure 2; Gupta: Abstract, lines 7-11).

17. With respect to claim 6, Kaiser in view of Gupta discloses the method of claim 1,

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wherein distributing data through the nodes comprises:

assigning each grouping value and its associated period an assigned color

(Kaiser: Figure 2); and

coloring each node its assigned color to represent data, so that nodes having identical color share identical data (Kaiser: Figure 2).

18. With respect to claim 7, Kaiser in view of Gupta discloses the method of claim 1 wherein re-distributing the data comprises:

associating data records of a first timeline and a second timeline from the plurality of timelines with a first grouping value (Gupta: Column 2, lines 41-52); and

synchronizing the data records (Gupta: Column 3, lines 38-47).

19. With respect to claim 8, Kaiser in view of Gupta discloses the method of claim 1 wherein distributing data comprises removing a node from the directed graph that corresponds to a timeline period that is associated with a data record having data at its beginning (Gupta: Column 7, lines 10-17; Kaiser: Paragraph 61, lines 1-12; Figure 2).

20. With respect to claim 9, Kaiser in view of Gupta discloses the method of claim 1 wherein distributing data comprises:

traversing the directed graph and designating consecutive nodes identically so as to represent identical data stored in association with the grouping values represented by the consecutive nodes (Kaiser: Paragraph 11, lines 1-9; Figure 2); and

stopping the traversing upon reaching a differently-designated node (Kaiser: Paragraph 11, lines 1-9).

21. With respect to claim 10, Kaiser in view of Gupta discloses an apparatus comprising a storage medium having instructions stored thereon, the instructions including:

a first code segment for selecting a first grouping value sequence associated with a first timeline, the first timeline including first data records (Gupta: Column 9, lines 18-20; Figure 4);

a second code segment for selecting a second grouping value sequence associated with a second timeline, the second timeline including second data records (Gupta: Column 9, lines 20; Figure 4);

a third code segment for mapping the first grouping value sequence and the second grouping value sequence into nodes of a directed graph (Kaiser: Paragraph 5, lines 1-2; Paragraph 10, lines 8-12; Gupta: Column 3, lines 38-47; Gupta: Column 2, lines 41-52); and

a fourth code segment for representing data associated with a first grouping value in the directed graph by providing a first designation to a first node associated with the first grouping value (Kaiser: Paragraph 7, lines 4-6; Figure 2).

22. With respect to claim 11, Kaiser in view of Gupta discloses the apparatus of claim 10 wherein the first data records and second data records are subject to a time

constraint such that no gap is allowed between any two of the first data records and second data records (Gupta: Column 7, lines 19-23).

23. With respect to claim 12, Kaiser in view of Gupta discloses the apparatus of claim 11 comprising a fifth code segment for extending a data record that precedes a gap in its associated timeline, in violation of the time constraint, until the data record meets a succeeding data record (Gupta: Column 7, lines 19-23).

24. With respect to claim 13, Kaiser in view of Gupta discloses the apparatus of claim 11 comprising a fifth code segment for recursively distributing data through the directed graph in response to a modification of one of the first data records, beginning with a high date of the first timeline and the second timeline, to ensure that all of the first and second data records are in accordance with the time constraint (Kaiser: Paragraph 61, lines 1-12; Figure 2).

25. With respect to claim 14, Kaiser in view of Gupta discloses the apparatus of claim 13 comprising a sixth code segment for mapping the directed graph into a modified first timeline and a modified second timeline (Kaiser: Paragraph 5, lines 1-3; Figure 2; Gupta: Abstract, lines 7-16; Figure 4).

26. With respect to claim 15, Kaiser in view of Gupta discloses the apparatus of claim 10 wherein each grouping value is associated with a time period, and wherein

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identical data appears in the first timeline and the second timeline whenever a grouping value and period overlap (Gupta: Column 7, lines 18-23).

27. With respect to claim 16, Kaiser in view of Gupta discloses the apparatus of claim 10 comprising:

a fifth code segment for assigning identical grouping values to a single node of the directed graph (Kaiser: Figure 2); and

a sixth code segment for inserting edges of the directed graph between pairs of nodes that correspond to consecutively-occurring ones of grouping values from the first grouping value sequence and the second grouping value sequence (Kaiser: Figure 2; Paragraph 7, lines 4-6).

28. With respect to claim 17, Kaiser in view of Gupta discloses the apparatus of claim 10 comprising a fifth code segment for removing a node from the directed graph that corresponds to a timeline period that is associated with a data record having data at its beginning (Gupta: Column 7, lines 10-17; Kaiser: Paragraph 61, lines 1-12; Figure 2).

29. With respect to claim 18, Kaiser in view of Gupta discloses the apparatus of claim 10 comprising:

a fifth code segment for traversing the directed graph and designating consecutive nodes identically so as to represent identical data stored in association with

the grouping values represented by the consecutive nodes (Kaiser: Paragraph 11, lines 1-9; Figure 2); and

a sixth code segment for stopping the traversing upon reaching a differently-designated node (Kaiser: Paragraph 11, lines 1-9).

30. With respect to claim 19, Kaiser in view of Gupta discloses a system comprising:

means for associating nodes of a directed graph with grouping periods and grouping values associated with timelines (Kaiser: Paragraph 5, lines 1-2; Gupta: Column 3, lines 38-47);

means for associating an edge of the directed graph between succeeding grouping periods (Kaiser: Paragraph 7, lines 4-6); and

means for distributing data associated with the timelines by operating on the directed graph, and thereafter translating the directed graph back into the timelines (Kaiser: Paragraph 35, lines 1-16; Paragraph 61, lines 1-12; Gupta: Column 2, lines 41-52).

31. With respect to claim 20, Kaiser in view of Gupta discloses the system of claim 19 wherein the timelines comprise data records that are subject to a time constraint such that no temporal gap is allowed to exist between any two of the data records (Gupta: Column 7, lines 19-23).

32. With respect to claim 21, Kaiser in view of Gupta discloses the system of claim

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19 comprising means for designating nodes of the directed graph as corresponding to grouping periods containing data (Kaiser: Figure 2).

33. With respect to claim 22, Kaiser in view of Gupta discloses the system of claim 19 wherein a grouping period and a grouping value are associated with identical data of the timelines (Kaiser: Figure 2; Gupta: Column 3, lines 38-47).

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Lystad reference (US Publication 2005/0192783) teaches about translating grouping values into nodes of a directed graph.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rezwanul Mahmood whose telephone number is (571)272-5625. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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